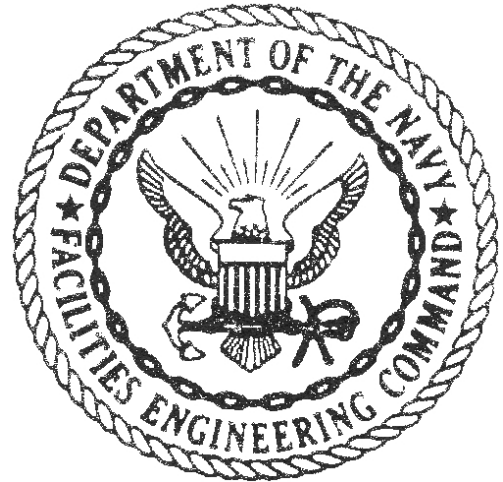
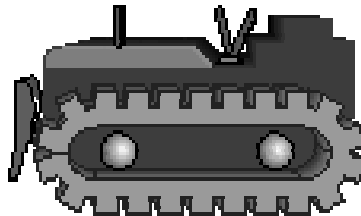


CONSTRUCTION
BASIC
VETERANS



EQUIPMENT OPERATOR

Qualification Standards



NAVFAC P-1152

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APPROVED FOR PUBLIC RELEASE

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NAVAL FACILITIES ENGINEERING COMMAND
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EQUIPMENT OPERATOR

Qualification Standards

EO Topics - Phase 1 (EO-1)		EO Topics - Phase 2 (EO-2)	
<u>Topic #</u>	<u>Topic Title</u>	<u>Topic #</u>	<u>Topic Title</u>
500	Mathematics	512	Motorized Scraper Preventative Maintenance and Safety
501	Equipment Operator Safety	513	Scraper Spread, Fill, and Excavate Operations
502	Defensive Driving (Accident Avoidance)	514	Grader Safety and Preventative Maintenance
503	Equipment Maintenance and Utilization Forms	515	Grade an Area and Construct a V-ditch
504	Operator Technical, Field, and Lubrication Manuals	516	Crawler Tractor Safety and Operations
505	Preventive Maintenance for Tractor and Trailers	517	Push Loading Scrapers with a Crawler Tractor
506	Drive and Backup a Tractor and Trailer	518	Stockpile and Spread Material with a Crawler Tractor
507	Couple and Uncouple Tractors to Trailers	519	Construction of a Ditch with a Crawler Tractor
508	Tie Down Procedures for Construction Equipment	523	Earthwork Operations
509	Convoy Procedures	524	Air Compressors
510	5-Ton Dump Truck Safety, Driving, and Preventative Maintenance	525	Compaction Equipment
511	5-Ton Dump Truck Dumping and Spreading Operations		
520	Scooploader Preventative Maintenance and Safety		
521	Scooploader Clamshell Operations		
522	Forklift Operation		

The above items may be accomplished by (but are not limited to) utilizing one or more of the training resources listed below. Selecting the right training resource(s) is the responsibility of your chain of command. Considerations such as cost and availability must be included in determining which resource(s) best meet your and your command's particular needs.

Training Resources

Mobile Training Teams	Vocational Technical Schools	Utility companies
NCTC Port Hueneme	Local Contractors	OJT "AT" with an active duty NMCB
NCTC Gulfport	Contract instructors	Municipal Public Schools (night school)
Other Naval/Service Schools	Municipal public works	Other(s)

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Section 500

500 Mathematics

References:

- a. ~~Mathematics, Vol. 1. NAVPERS 10069-C~~¹
- a. Mathematics, Basic Math and Algebra, NAVEDTRA 14139
- b. ~~General Mathematics for Construction Ratings, NAVPERS 94415~~²

500.1 With the use of a calculator, **CONVERT** whole numbers, fractions, decimals, and percents.

(Signature)

(Date)

.2 With the use of a calculator, **CALCULATE** the area for a polygon, a circle, and surface area for a cylinder.

(Signature)

(Date)

¹ Obsolete. Replaced with NAVEDTRA 14139. See NAVEDTRA Number Conversion Table, Updated 27 September 2002.

Note: NAVEDTRA 10069-C was more recently published as *Mathematics, volume 1*, NAVEDTRA 10069-D1 (also obsolete). Volume 1 provides a review of basic arithmetic and elementary algebra; it includes fractions, decimals, percentages, exponents, radicals, and logarithms. It also contains exercises in factoring polynomials, linear equations, ratio, proportions, variation, complex numbers and quadratic equations. It presents brief introduction to plane figures, geometric construction, and trigonometry. Reduction, and General Maintenance books.) Reference: *Electronics Technician Supervisor (ET1)* NAVEDTRA: 14085, page 1-6.

Retrieved January 3, 2003 from https://www.advancement.cnet.navy.mil/products/web-pdf/tramans/bookchunks/14085_ch1.pdf

² Obsolete.

Section 500, cont'd

- .3 With the use of a calculator, **CALCULATE** the volume for a cone, sphere, cylinder, and rectangular-block shape.

(Signature)

(Date)

- .4 With the use of a calculator, **COMPUTE** ratio and proportion.

(Signature)

(Date)

- .5 **CONVERT** US measurement to METRIC and METRIC measurement to US measurement.

(Signature)

(Date)

Additional question for your review (no signature required):

- With the use of a calculator, **SOLVE** mathematical problems common to the Equipment Operator rating.

EQUIPMENT OPERATOR

Qualification Standards

Section 501

501 Equipment Operator Safety

References:

- a. Equipment Operator Basic NAVEDTRA 14081, 1994 Edition
- b. NAVOSH program manual OPNAVINST 5100.19 D

501.1 **EXPLAIN** the importance of having a basic knowledge of safety while operating and working around equipment.

(Signature)

(Date)

.2 **EXPLAIN** and **DEMONSTRATE** proper hand signals.

(Signature)

(Date)

.3 **DESCRIBE** proper safety procedures for mounting and dismounting equipment.

(Signature)

(Date)

.4 **DESCRIBE** all classes of fire extinguishers required for equipment operations and their use.

(Signature)

(Date)

Section 501, cont'd

- .5 **DESCRIBE** unsafe vehicle operations, and **IDENTIFY** a vehicle safety plan.

(Signature)

(Date)

- .6 **EXPLAIN** what must be done before the movement of any type of construction equipment.

(Signature)

(Date)

- .7 **IDENTIFY** what must and must not be worn when operating construction equipment.

(Signature)

(Date)

- .8 **DESCRIBE** what must be done regarding petroleum, oil and lube spills from equipment and identify clean-up procedures. **DESCRIBE** the use of the MSDS.

(Signature)

(Date)

Section 501, cont'd

Additional questions for your review (no signature required)

- **EXPLAIN** the Hearing Conservation Program.
- **DESCRIBE** the appropriate Personal Protective Equipment (PPE) & explain the importance of each in relation to equipment operations.
- **EXPLAIN** the dangers of hydraulic controls and attachments in relation to equipment.

EQUIPMENT OPERATOR

Qualification Standards

Section 502

502 Defensive Driving (Accident Avoidance)

References:

- a. Equipment Operator Basic NAVEDTRA 14081, 1994 Edition
- b. Navy Drivers Handbook, NAVFAC MO 403

502.1 **EXPLAIN** the techniques of defensive driving.

(Signature)

(Date)

.2 **EXPLAIN** the meaning of Defensive Driving and the relationship it has to accident avoidance.

(Signature)

(Date)

.3 **EXPLAIN** the importance of looking far enough ahead of your vehicle.

(Signature)

(Date)

.4 **DESCRIBE** how weather conditions effects an operator's driving abilities.

(Signature)

(Date)

Section 502, cont'd

- .5 **EXPLAIN** matching your vehicle speed to road surface conditions.

(Signature)

(Date)

- .6 **EXPLAIN** space management is and how it is used.

(Signature)

(Date)

- .7 **DEMONSTRATE** proper procedures regarding lane changes.

(Signature)

(Date)

- .8 **EXPLAIN** how turns and vehicle load can affect your vehicles operating performance.

(Signature)

(Date)

- .9 **EXPLAIN** why driving at night is more dangerous than day.

(Signature)

(Date)

- .10 **DESCRIBE** the most common road hazards of importance to the operator.

(Signature)

(Date)

Section 502, cont'd

Additional Questions for your review (no signature required)³

- **EXPLAIN** why it is important to plan your routes and are aware of surroundings prior to commencing trip or maneuvers.
- **EXPLAIN** right of way procedures.

³ Courtesy of Naval Construction Training Center Gulfport, 09JAN2003.

EQUIPMENT OPERATOR

Qualification Standards

Section 503

503 Equipment Maintenance and Utilization Forms

References:

a. Equipment Operator Basic NAVEDTRA 14081, 1994 Edition

503.1 **EXPLAIN** the importance of understanding the correct use of maintenance, utilization and safety forms.

(Signature)

(Date)

.2 **EXPLAIN** the use of the following: NAVFAC 9-11240/13, DD1970, DD518, and SF91.

(Signature)

(Date)

.3 **COMPLETE** the following forms: NAVFAC 9-11240/13, DD 1970, DD 518, and SF91.

(Signature)

(Date)

Section 503, cont'd

.4 **DESCRIBE** what the form DD518 is used for.

(Signature)

(Date)

.5 **DESCRIBE** what form shows condition / status of equipment.

(Signature)

(Date)

EQUIPMENT OPERATOR

Qualification Standards

Section 504

504 Operator Technical, Field, and Lubrication Manuals

References:

- a. Equipment Operator Basic NAVEDTRA 14081, 1994 Edition
- b. FM 21-305/LO 9-2320-211-12
- c. Vehicle Technical Manual

504.1 **INTERPRET** technical manuals, field manuals, and lubrication orders.

(Signature)

(Date)

.2 **INTERPRET** the Table of Contents used to identify TMs, FMs, and LOs.

(Signature)

(Date)

.3 **EXPLAIN** and use the Table of Contents on TMs, FMs, and LOs; use the appendixes, glossary, and PM charts. (First Echelon Maintenance)
DESCRIBE how the numbering system works for these manuals.

(Signature)

(Date)

EQUIPMENT OPERATOR

Qualification Standards

Section 505

505 Preventive Maintenance for Tractors and Trailers

References:

- a. Equipment Operator Basic NAVEDTRA 14081, 1994 Edition
- b. TM-9-2320-273-10
- c. FM-21-305

505.1 **EXPLAIN** the importance of preventive maintenance.

(Signature)

(Date)

.2 **DESCRIBE** what before, during, and after operation preventive maintenance inspections are.

(Signature)

(Date)

.3 **EXPLAIN** what must be done if an operator is in doubt about a weekly maintenance check.

(Signature)

(Date)

.4 **DESCRIBE** the weekly and monthly preventive maintenance checklist items.

(Signature)

(Date)

Section 505, cont'd

- .5 **DESCRIBE** a weekly transmission inspection.

(Signature)

(Date)

- .6 **EXPLAIN** the process and frequency of inspecting the fifth wheel and ramps.

(Signature)

(Date)

- .7 **DESCRIBE** the process of inspecting the undercarriage.

(Signature)

(Date)

- .8 **DESCRIBE** what precautions must be taken when checking a hot radiator.

(Signature)

(Date)

- .9 **LIST** all items that must be checked regarding the exterior of a vehicle for safe operation.

(Signature)

(Date)

Additional questions for review (no signature required)⁴

- **EXPLAIN** the procedures for freeing a stuck fifth wheel.
- **DESCRIBE** what safety precautions the operator must adhere to when freeing a stuck fifth wheel.

⁴ Courtesy of Naval Construction Training Center Gulfport, 09JAN2003

EQUIPMENT OPERATOR

Qualification Standards

Section 506

506 Drive and Back-Up the Tractor and Trailer.

References:

- a. Equipment Operator Basic NAVEDTRA 14081, 1994 Edition
- b. TM 9-2320-260-10
- c. FM 21-305

506.1 **DEMONSTRATE** ability to conduct a pre-start inspection on the power unit and trailer.

(Signature)

(Date)

.2 **DESCRIBE** all safety related items that must be checked before operating tractor-trailers.

(Signature)

(Date)

.3 **EXPLAIN** what must be put in place when tractor-trailers are parked to keep unit from rolling⁵.

(Signature)

(Date)

.4 **DESCRIBE** what must be worn at all times by driver and passenger while operating tractor-trailers.

(Signature)

(Date)

⁵ Question originates from the days when tractor-trailers did not have airbrakes.
EOC Bird, NCTC Gulfport, 16 Jan 2003

Section 506, cont'd

- .5 **EXPLAIN** what drivers must constantly be aware of during operation and correct before they become a hazardous condition.

(Signature)

(Date)

- .6 **DEMONSTRATE** your ability to operate a tractor-trailer on various roadways with an experienced licensed evaluator.

(Signature)

(Date)

- .7 **DEMONSTRATE** your ability to back-up and park a tractor-trailer with limited space using correct procedures for back-up.

(Signature)

(Date)

- .8 **EXPLAIN** the importance of proper lane changes and how proper lane changes are completed.

(Signature)

(Date)

- .9 **EXPLAIN** why the operator must focus his eyes on the mirrors while backing-up, and what will happen if the operator becomes distracted.

(Signature)

(Date)

Section 506, cont'd

- .10 **DEMONSTRATE** the proper hand signals for tractor-trailer operations. **DESCRIBE** why a ground guide must be used at all times.

(Signature)

(Date)

EQUIPMENT OPERATOR

Qualification Standards

Section 507

507 Couple and Uncouple Tractors to Trailers

References:

- a. Equipment Operator Basic NAVEDTRA 14081, 1994 Edition
- b. TM 9-2320-273-10

507.1 **EXPLAIN** the importance of correct couple and uncouple procedures.

(Signature)

(Date)

.2 **EXPLAIN** what must be done before backing under any trailer unit with a tractor.

(Signature)

(Date)

.3 **DESCRIBE** what must be in place before backing under a trailer, and where these should be placed.

(Signature)

(Date)

Section 507, cont'd

- .4 **IDENTIFY** the correct position of the fifth wheel air slide control for couple and uncouple operations.

(Signature)

(Date)

- .5 **EXPLAIN** what happens if the kingpin on the trailer misses the tractor fifth wheel locking device.

(Signature)

(Date)

EQUIPMENT OPERATOR

Qualification Standards

Section 508

508 Tie-Down Procedures for Construction Equipment

References:

- a. Equipment Operator Basic NAVEDTRA 14081, 1994 Edition
- b. TM 9-2320-273-10, TM-9-2320-211-10
- c. FM-21-305

508.1 **DEMONSTRATE** ability to properly ground guide a designated piece of equipment onto a semi-trailer.

(Signature)

(Date)

.2 **DEMONSTRATE** how to secure a piece of construction equipment onto a semi-trailer.

(Signature)

(Date)

.3 **EXPLAIN** how chains and load binders should be put in place, and what safety requirements need to be addressed.

(Signature)

(Date)

Section 508, cont'd

- .4 **EXPLAIN** the difference between the equipment tie-down eye and a lifting eye.

(Signature)

(Date)

- .5 **EXPLAIN** what condition the deck of an equipment trailer must be in. **EXPLAIN** proper ramp positioning prior to loading.

(Signature)

(Date)

Additional question for your review (no signature required)⁶

- **DESCRIBE** what types of chains and binders must be used for securing various pieces of equipment.
- **EXPLAIN** the dangers and safety measures in using a cheater bar.
- **EXPLAIN** how frequent chains, straps, binder, etc. should be checked when traveling.

⁶ Courtesy of Naval Construction Training Center Gulfport, 09JAN2003

EQUIPMENT OPERATOR

Qualification Standards

Section 509

509 Convoy Procedures

References:

- a. Equipment Operator Basic NAVEDTRA 14081, 1994 Edition
- b. TM-9-2320-273-10
- c. FM-21-305 and FM-55-30

509.1 **DEMONSTRATE** convoy control hand and arm signals.

(Signature)

(Date)

.2 **OPERATE** a tractor and trailer in a convoy using defensive driving methods.

(Signature)

(Date)

.3 **DESCRIBE** all elements of a convoy from initial briefing through command and signal.

(Signature)

(Date)

.4 **DESCRIBE** what the term "halts" are used for in convoys.
DEFINE the term "catch-up speed."

(Signature)

(Date)

Section 509 cont'd

Additional question for your review (no signature required)⁷

- **DESCRIBE** the procedures for a tactical convoy during the day or night.
- **DESCRIBE** the procedures for a tactical convoy though friend or foe terrain.

⁷ Courtesy of Naval Construction Training Center Gulfport, 09JAN2003

EQUIPMENT OPERATOR

Qualification Standards

Section 510

510 **5-Ton Dump Truck Safe Driving and Preventive Maintenance**

References:

- a. Equipment Operator Basic NAVEDTRA 14081, 1994 Edition
- b. TM-9-2320-272-10, TM-9-2320-260-10

510.1 **DEMONSTRATE** ability to maintain full control of the vehicle going forward and backward.

(Signature)

(Date)

.2 **EXPLAIN** the importance of knowing how to safely drive a 5-ton dump truck.

(Signature)

(Date)

.3 **DEMONSTRATE** the procedures for a pre-start inspection on a 5-ton dump truck.

(Signature)

(Date)

.4 **EXPLAIN** the use of safety bars on a raised 5-ton dump truck bed.

(Signature)

(Date)

Section 510, cont'd

- .5 **DESCRIBE** what a driver of a 5-ton dump truck must do during loading and unloading operations.

(Signature)

(Date)

- .6 **DESCRIBE** what a driver of a 5-ton dump truck must do when the "Low Air Pressure" buzzer sounds.

(Signature)

(Date)

- .7 **DEFINE** the maximum speed of a 5-ton dump truck and maximum governed RPMs.

(Signature)

(Date)

- .8 **DESCRIBE** what is meant by the term "high center of gravity" and **DEFINE** correct loading procedures.

(Signature)

(Date)

- .9 **DESCRIBE** tire pressure on the front, rear, and spare tires of a 5-ton dump truck.

(Signature)

(Date)

Section 510, cont'd

- .10 **DEFINE** the struck capacity and heaped capacity of a full dump truck bed.

(Signature)

(Date)

- .11 **EXPLAIN** how many positions are used on the dump control lever to operate the dump bed.

(Signature)

(Date)

- .12 **EXPLAIN** what the PTO lever is for on a dump truck.

(Signature)

(Date)

EQUIPMENT OPERATOR

Qualification Standards

Section 511

511 5-Ton Dump Truck Dumping and Spreading Operations

References:

- a. Equipment Operator Basic NAVEDTRA 14081, 1994 Edition
- b. TM-9-2320-272-10, DA PAM 738-750

511.1 **DEMONSTRATE** full control of a dump truck while dumping material.

(Signature)

(Date)

.2 **EXPLAIN** why proper tire inflation in the tires is so important for dumping operations.

(Signature)

(Date)

.3 **DESCRIBE** what must be done to get free flow of material from under the tailgate.

(Signature)

(Date)

.4 **DESCRIBE** what the rocker position is on the tailgate of a 5-ton dump truck.

(Signature)

(Date)

Section 511, cont'd

- .5 **EXPLAIN** what position the dump truck body control lever must be in to prevent dump truck body from raising during dump operations.

(Signature)

(Date)

- .6 **DEMONSTRATE** correct spreading of material with the tailgate set in the spreader position.

(Signature)

(Date)

- .7 **EXPLAIN** what must be done with the dump truck body control lever when the dump truck body is not in use.

(Signature)

(Date)

- .8 **DESCRIBE** how to lock the tailgate on a dump truck.

(Signature)

(Date)

Additional question for your review (no signature required)⁸

- **DEMONSTRATE** and **EXPLAIN** freeing a stuck object in a dump bed, keeping safety in mind.

⁸ Courtesy of Naval Construction Training Center Gulfport, 09JAN2003

EQUIPMENT OPERATOR

Qualification Standards

Section 512

512 Motorized Scraper Preventive Maintenance and Safety

References:

- a. Earthmoving Operations FM-5-434, 30SEP92
- b. Scraper, Earthmoving, AUG 85, TM-5-3805-248-14
- c. Scraper Caterpillar, Model 621-B 14-18 Cubic Yards

512.1 **EXPLAIN** what the three-point contact for operating motorized scrapers is.

(Signature)

(Date)

.2 **PERFORM** pre-start inspection.

(Signature)

(Date)

.3 **PERFORM** during operating checks.

(Signature)

(Date)

.4 **EXPLAIN** proper shutdown procedures.

(Signature)

(Date)

Section 512, cont'd

- .5 **DESCRIBE** what extra steps must be taken while operating motorized scrapers under dusty conditions.

(Signature)

(Date)

- .6 **EXPLAIN** the proper push technique for scrapers.

(Signature)

(Date)

- .7 **EXPLAIN** what must be done when traveling to a fill site.
DESCRIBE what position the bowl should travel in.

(Signature)

(Date)

- .8 **DESCRIBE** what happens when the apron is opened and closed.

(Signature)

(Date)

- .9 **EXPLAIN** what a complete scraper cycle consists of.

(Signature)

(Date)

- .10 **DESCRIBE** how to push a scraper with a crawler tractor.

(Signature)

(Date)

Section 512, cont'd

- .11 **IDENTIFY** the maximum spread depth of the scraper.

(Signature)

(Date)

- .12 **DESCRIBE** what four positions the apron can be placed for normal operation.

(Signature)

(Date)

- .13 **EXPLAIN** the difference between the 621-B scraper and the 613-B scraper.

(Signature)

(Date)

- .14 **DESCRIBE** what should never be done when exiting the scraper cab.

(Signature)

(Date)

- .15 **EXPLAIN** the importance of the Rollover Protection System (ROPS) and what should be checked before operating a scraper.

(Signature)

(Date)

- .16 **DESCRIBE** when cutting edges on the scraper have to be changed.

(Signature)

(Date)

EQUIPMENT OPERATOR

Qualification Standards

Section 513

513 Scraper Spread, Fill, and Excavate Operations

References:

- a. Equipment Operator Basic NAVEDTRA 14081, 1994 Edition
- b. FM-5-434 Earthmoving Operations 30SEP92
- c. TM-5-3805-248-14 Scraper Earth Moving AUG 85

513.1 **EXPLAIN** how material is correctly spread with a scraper.

(Signature)

(Date)

.2 **DESCRIBE** what to avoid while moving off road with regard to waterways and vegetation.

(Signature)

(Date)

.3 **DEFINE** the struck capacity of a scraper bowl.

(Signature)

(Date)

.4 **EXPLAIN** how the crawler tractor makes contact with a scraper.

(Signature)

(Date)

Section 513, cont'd

- .5 **EXPLAIN** how many forward and reverse gears a scraper has.

(Signature)

(Date)

- .6 **IDENTIFY** the correct tire pressure for the scraper tractor.

(Signature)

(Date)

Equipment Operator

Qualification Standards

Section 514

514 Grader Safety and Preventive Maintenance

References:

- a. Equipment Operator Basic NAVEDTRA 14081, 1994 Edition
- b. TM-5-3805-261-10 Graders Cat 130G MAR89
- c. FM-5-434 Earthmoving Operations 30SEP92

514.1 **DEMONSTRATE** ability to do pre-start maintenance inspection on the road graders.

(Signature)

(Date)

.2 **DEMONSTRATE** ability to operate a road grader and **EXPLAIN** use of all controls and gauges.

(Signature)

(Date)

.3 **DESCRIBE** how many forward gears are on a road grader and maximum miles per hour.

(Signature)

(Date)

.4 **DESCRIBE** what the mold board is used for.

(Signature)

(Date)

Section 514, cont'd

- .5 **DESCRIBE** what the articulation cylinder does on the grader.

(Signature)

(Date)

- .6 **IDENTIFY** the safe operating tire pressure for graders.

(Signature)

(Date)

- .7 **DURING** cutting operations describe why the blade of a grader must be on the ground before engaging the float option.

(Signature)

(Date)

- .8 **DESCRIBE** the basic grader components and principal parts of a motor grader.

(Signature)

(Date)

- .9 **EXPLAIN** the difference between normal front steering and motor graders that have articulated frame steering. **DISCUSS** the advantages and disadvantages of each type.

(Signature)

(Date)

- .10 **EXPLAIN** why motor graders have wheel lean ability and how it is used.

(Signature)

(Date)

EQUIPMENT OPERATOR

Qualification Standards

Section 515

515 Grade an Area and Construct a V-Ditch

References:

- a. Equipment Operator Basic NAVEDTRA 14081, 1994 Edition
- b. TM-5-2410-261-10, FM-5-434

515.1 **IDENTIFY** the most efficient turn-around point for graders blading and backing operations.

(Signature)

(Date)

.2 **EXPLAIN** the correct procedures for constructing a V-ditch.

(Signature)

(Date)

.3 **DESCRIBE** what other operations can be accomplished with a motor grader.

(Signature)

(Date)

.4 **DESCRIBE** all attachments that are available for use with graders.

(Signature)

(Date)

Section 515, cont'd

- .5 **EXPLAIN** what must be done to a graded surface before finish grading can start.

(Signature)

(Date)

- .6 **EXPLAIN** what must never be done when a grader is left unattended.

(Signature)

(Date)

- .7 **DEMONSTRATE** proper blade positioning using degrees for V-ditch operations.

(Signature)

(Date)

Additional questions for your review (no signature required)⁹

- **EXPLAIN** the terms: top, heel, and “wind row”.
- **EXPLAIN** why it is important to take elevations prior to grading.
- **DEMONSTRATE** various blade positions. Explain the reason for each.

⁹ Courtesy of Naval Construction Training Center Gulfport, 09JAN2003

EQUIPMENT OPERATOR

Qualification Standards

Section 516

516 Crawler Tractor Safety and Operations

References:

- a. Equipment Operator Basic NAVEDTRA 14081, 1994 Edition
- b. FM-5-434 Earthmoving Operations, 30 SEP 92
- c. TM-5-2410-237-10 Tractor, Full Tracked, Low Speed, DED, Medium Draw-bar Pull, D7G, JAN 93

516.1 **DESCRIBE** weekly operators maintenance.

(Signature)

(Date)

.2 **IDENTIFY** all 50-hour lubrication points and locations.

(Signature)

(Date)

.3 **DESCRIBE** proper types of hearing protection used on all crawler tractors.

(Signature)

(Date)

.4 **IDENTIFY** all safety related material regarding crawler tractors.

(Signature)

(Date)

Section 516, cont'd

- .5 **DESCRIBE** the required minimum safety zone for personnel when performing winch operations.

(Signature)

(Date)

- .6 **EXPLAIN** the purpose of the decelerator pedal.

(Signature)

(Date)

- .7 **DESCRIBE** the maximum penetration depth of rippers.

(Signature)

(Date)

- .8 **DESCRIBE** how drawbar pull is determined for crawler tractors.

(Signature)

(Date)

- .9 **EXPLAIN** the maximum fore/aft slope the crawler tractor can safely operate on.

(Signature)

(Date)

EQUIPMENT OPERATOR

Qualification Standards

Section 517

517 Push Loading Scrapers with a Crawler Tractor

References:

- a. Equipment Operator Basic NAVEDTRA 14081, 1994 Edition
- b. TM-5-2410-237-10, FM-5-434

517.1 **DEMONSTRATE** ability to safely operate a crawler tractor during push loading operations with a scraper.

(Signature)

(Date)

.2 **DESCRIBE** what gear the crawler operator must use for scraper pushing operations.

(Signature)

(Date)

.3 **DESCRIBE** the proper blade for pushing scrapers.

(Signature)

(Date)

.4 **DESCRIBE** what the crawler operator does if the scraper begins to jackknife.

(Signature)

(Date)

EQUIPMENT OPERATOR

Qualification Standards

Section 518

518 Stockpile and Spread Material with a Crawler Tractor

References:

- a. Equipment Operator Basic NAVEDTRA 14081, 1994 Edition
- b. FM-5-434 Earthmoving Operations
- c. TM-2410-237-10 Tractor Full Tracked

518.1 **DEMONSTRATE** ability to stockpile material a minimum of 5 feet in height.

(Signature)

(Date)

.2 **DEMONSTRATE** ability to excavate material no deeper than 6"-8" per pass while maintaining a smooth surface. (For field test purposes, plus or minus four inches is acceptable)

(Signature)

(Date)

.3 **DEMONSTRATE** ability to spread material. **DESCRIBE** the blade position so the material may drift properly.

(Signature)

(Date)

Section 518, cont'd

- .4 **DEMONSTRATE** material back-fill procedures and **EXPLAIN** what blade is best used for back-fill.

(Signature)

(Date)

- .5 **EXPLAIN** the advantages of side-by-side crawler tractor hauls up to 100 feet.

(Signature)

(Date)

- .6 **EXPLAIN** cross-friction steering.

(Signature)

(Date)

EQUIPMENT OPERATOR

Qualification Standards

Section 519

519 Construction of a Ditch with a Crawler Tractor

References:

- a. Equipment Operator Basic NAVEDTRA 14081, 1994 Edition
- b. FM-5-434 Earthmoving Operations 30SEP92
- c. TM-5-2410-237-10 Tractor Full Tracked

519.1 **DEMONSTRATE** rough ditching with a crawler tractor.

(Signature)

(Date)

.2 **DEMONSTRATE** correct procedures to construct a flat bottom type ditch.

(Signature)

(Date)

.3 **DESCRIBE** the best blade to construct a flat bottom ditch.

(Signature)

(Date)

.4 **DESCRIBE** leveling with a crawler tractor.

(Signature)

(Date)

EQUIPMENT OPERATOR

Qualification Standards

Section 520

520 Scoop Loader Preventive Maintenance and Safety

References:

- a. Equipment Operator Basic NAVEDTRA 14081, 1994 Edition
- b. TM-5-3805-262-10 Loaders Scoop Type SEP87

520.1 **IDENTIFY** all safety requirements regarding loader operators.

(Signature)

(Date)

.2 **DEMONSTRATE** ability to locate and service all 10 hour lubrication points on loaders.

(Signature)

(Date)

.3 **DEFINE** what standard form is used to annotate all operator deficiencies found on a scoop type loader.

(Signature)

(Date)

.4 **EXPLAIN** the operator maintenance for loaders, and **WHY** it must be performed in the same order each time it is done.

(Signature)

(Date)

Section 520, cont'd

- .5 **DEMONSTRATE** correct procedure for checking the hydraulic reservoir on loaders.

(Signature)

(Date)

- .6 **DESCRIBE** correct procedures for changing out the following attachments:

- a. Boom attachment
- b. Backhoe attachment
- c. Forklift attachment
- d. Four-in-one bucket attachment

(Signature)

(Date)

Additional questions for your review (no signature required)¹⁰

- **EXPLAIN** the importance of safety when dealing with hydraulics

¹⁰ Courtesy of Naval Construction Training Center Gulfport, 09JAN2003

EQUIPMENT OPERATOR

Qualification Standards

Section 521

521 Scooploader Clamshell Operations

References:

- a. Earthmoving Operations 30SEP92, FM-5-434
- b. Loader, Scoop-type MW-24C, 01SEP87, TM-53805262-10, TM-5-3805-262-10
- c. Equipment Operator Basic NAVEDTRA 12535 (new 1994)

521.1 **DESCRIBE** the general safety requirements for scoop loader operations.

(Signature)

(Date)

.2 **DEMONSTRATE** ability to operate and maneuver a loaded scoop loader over uneven terrain.

(Signature)

(Date)

.3 **PERFORM** pre-start inspection and shut down procedures correctly.

(Signature)

(Date)

.4 **DESCRIBE** the proper position of the bucket when moving the scoop loader to a work site.

(Signature)

(Date)

Section 521, cont'd

- .5 **IDENTIFY** correct scoop loader stopping distance from any haul unit.

(Signature)

(Date)

- .6 **DESCRIBE** in detail what must be done after making contact with a load to be hauled with a scoop loader.

(Signature)

(Date)

- .7 **EXPLAIN** what procedures take place to put a scoop loader into the scraping position.

(Signature)

(Date)

- .8 **DESCRIBE** what control levers control up and down movement of the bucket on scoop loaders.

(Signature)

(Date)

- .9 **DEMONSTRATE** the pick-up of three separate loads, one load at a time, and safely move to a designated dump area.

(Signature)

(Date)

Section 521, cont'd

- .10 **DESCRIBE** what must and must not be worn operating a scoop loader.

(Signature)

(Date)

- .11 **DEMONSTRATE** through **OPERATION** the correct procedures for changing out the following attachments:

- a. Boom attachment
- b. Backhoe attachment
- c. Forklift attachment
- d. Four-in-one bucket attachment

(Signature)

(Date)

Additional question for your review (no signature required)¹¹

- **EXPLAIN** the importance of knowing your surrounding prior to commencing loader operations

¹¹ Courtesy of Naval Construction Training Center Gulfport, 09JAN2003

EQUIPMENT OPERATOR

Qualification Standards

Section 522

522 **Forklift Operation**

References:

- a. Equipment Operator Basic NAVEDTRA 14081, 1994 Edition
- b. Rough Terrain Forklift 4,000 lb. J. I. Case Company, Racine, WI (1989)

522.1 **DESCRIBE** in detail the basic principles of forklift operations and safety requirements.

(Signature)

(Date)

.2 **DESCRIBE** what the 4,000 lb. RT forklift is designed to be used for.

(Signature)

(Date)

.3 **EXPLAIN** how the RT forklift should be towed by another vehicle.

(Signature)

(Date)

.4 **EXPLAIN** what and where the RT forklift safety pins are and for what purpose they are used.

(Signature)

(Date)

Section 522, cont'd

- .5 **DESCRIBE** the differences in detail in the 4K, 6K, 12K and 16K forklifts.

(Signature)

(Date)

- .6 **DEMONSTRATE** the use of the drum handling attachments, crane boom, bare tines, and roller tines.

(Signature)

(Date)

- .7 **DESCRIBE** a forklift safety platform and how it is used.

(Signature)

(Date)

- .8 **DESCRIBE** the different forklift attachments:

- a. Drum handling attachment
- b. Crane boom attachment
- c. Bare tines attachment
- d. Roller tines attachment

(Signature)

(Date)

EQUIPMENT OPERATOR

Qualification Standards

Section 523

523 Earth Work Operations

References:

- a. Equipment Operator Basic NAVEDTRA 14081, 1994 Edition
- b. Naval Construction Battalion Crew Leaders Handbook
COMSECOND/COMTHIRD NCB Inst. 5200.X

523.1 **DEFINE** what earthwork operations are often referred to.

(Signature)

(Date)

.2 **DEFINE** the difference between material in cubic yards for in place material, loose, and compacted.

(Signature)

(Date)

.3 **DESCRIBE** how many different types of construction stakes there are and how they are used.

(Signature)

(Date)

.4 **EXPLAIN** how a dumpy level is used while using a Jacob's staff.

(Signature)

(Date)

Section 523, cont'd

- .5 **DESCRIBE** what a federal benchmark is used for.

(Signature)

(Date)

- .6 **EXPLAIN** what is meant by the words: pioneering, clearing, grubbing, and stripping.

(Signature)

(Date)

- .7 **DESCRIBE** what must be maintained at optimum content during compaction on a subgrade.

(Signature)

(Date)

- .8 **DEFINE** soil properties and **LIST** how many there are.

(Signature)

(Date)

- .9 **EXPLAIN** what a target reading is and how it is used.

(Signature)

(Date)

- .10 **DESCRIBE** what fore-slope and back-slope is used for in road construction.

(Signature)

(Date)

EQUIPMENT OPERATOR

Qualification Standards

Section 524

524 Air Compressors

References:

- a. Equipment Operator Basic NAVEDTRA 14081, 1994 Edition
- b. Naval Construction Battalion Crew Leaders Handbook,
COMSECOND/COMTHIRD NCB Inst. 5200.X

524.1 **DESCRIBE** safety features associated with Air Compressors.

(Signature)

(Date)

.2 **DESCRIBE** operators maintenance for the 250CFM compressor.

(Signature)

(Date)

.3 **PERFORM** pre-start inspection on 250 CFM compressor.

(Signature)

(Date)

.4 **OPERATE** pneumatic tools in association with the 250 CFM compressor.

(Signature)

(Date)

EQUIPMENT OPERATOR

Qualification Standards

Section 525

525 **Compaction Equipment**

References:

- a. Equipment Operator Basic NAVEDTRA 14081, 1994 Edition
- b. Naval Construction Battalion Crew Leaders Handbook,
COMSECOND/COMTHIRD NCB Inst. 5200.X

525.1 **DESCRIBE** safety features associated with Equipment listed below.

(Signature)

(Date)

.2 **DESCRIBE** operators maintenance for the Equipment listed below.

(Signature)

(Date)

.3 **PERFORM** pre-start inspection for the Equipment listed below.

(Signature)

(Date)

.4 **OPERATE** the Equipment listed below.

(Signature)

(Date)

NOTE: Compaction equipment pertinent to this section:

- a. Nine wheel roller¹²
- b. Vibratory roller
- c. Tamping foot

¹² Nine wheel roller (also known as a pneumatic roller) is no longer an A-School subject....likewise it is no longer an QSB requirement. Reference: Meeting with EOC Arrington and CWO4 Bailey, NCTC Gulfport, 10 April 2003

Section 525 cont'd

Additional questions for your review (no signature required)¹²

- **EXPLAIN** maximum distance from a structure you can operate a vibe.
- **DEMONSTRATE** a smooth transition from forward to reverse.

¹² Courtesy of Naval Construction Training Center Gulfport, 09JAN2003